

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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RATES TECHNOLOGY INC.,

Plaintiff,

- against -

BROADVOX HOLDING COMPANY,
LLC, CYPRESS COMMUNICATIONS
OPERATING COMPANY, LCC, AND
ABC COMPANIES, 1 TO 10,

Defendants.

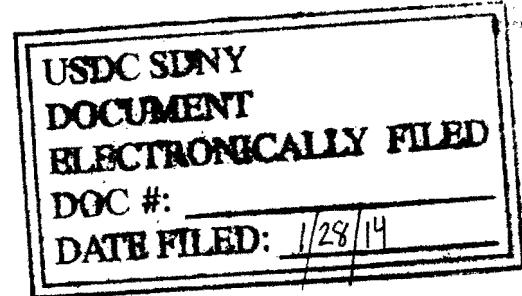
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SHIRA A. SCHEINDLIN, U.S.D.J.:

I. INTRODUCTION

Rates Technology Inc. (“RTI”) brings this action against Broadvox Holding Company, LLC, its named subsidiary, Cypress Communications Operating Company, LLC, and its unnamed subsidiaries or affiliates, ABC Companies 1 to 10 (collectively, “Broadvox”), for infringing two of RTI’s telecommunications patents: United States Patent No. 5,425,085 (the ““085 Patent”) and United States Patent No. 5,519,769 (the ““769 Patent”).¹

¹ See First Amended Complaint (“FAC”) ¶¶ 13, 21.



On December 27, 2013, the Court held a *Markman* hearing. The parties have agreed upon the meaning of three terms in claim 1 of the ‘085 Patent and two terms in claim 1 of the ‘769 Patent.² The parties dispute the meaning of nine terms in claim 1 of the ‘085 Patent and five terms in claim 1 of the ‘769 Patent.³ For reference, I have included a list of the constructions I have adopted at the end of this Opinion.⁴

II. BACKGROUND

A. The Invention

RTI has provided products and services in the telecommunications field for thirty years.⁵ RTI designs and manufactures technologies including private pay telephones, call cost rate chips, and least-cost-routing chips.⁶ On June 13, 1995, the Patent and Trademark Office (“PTO”) issued the ‘085 Patent, designating RTI as the sole assignee.⁷ The claimed invention relates to the routing

² See Table 1. These are the only claims at issue.

³ See Table 2.

⁴ See Table 3.

⁵ See Declaration of Gerald Weinberger (President of RTI), Ex. A to 12/19/13 Letter of Milton Springut, RTI’s counsel, to the Court, ¶ 2.

⁶ See *id.*

⁷ See ‘085 Patent, Ex. 1 to 1/6/14 Letter of Tal Benschar, RTI’s counsel, to the Court (“Benschar Ltr.”), at 1.

of calls based on cost.⁸ Broadvox Holding provides IP-based information services to approximately three hundred wholesale carriers, businesses, and enterprise retail customers.⁹ On May 21, 1996, the PTO issued the ‘769 Patent to RTI.¹⁰ The claimed invention relates to a method for updating a database in a telephone routing system.¹¹ In two 1998 decisions, Judge William Young of the District Court of Massachusetts construed several of the claims disputed here.¹² Several years later, the patents were returned to the PTO for reexamination, where the claims were reconsidered in light of prior art.¹³ While the reexaminations did not affect claim 1 of the ‘769 Patent, RTI added limitations to claim 1 of the ‘085 Patent to overcome the prior art.¹⁴

⁸ See FAC ¶ 11.

⁹ See *id.* ¶ 13.

¹⁰ See ‘769 Patent, Ex. 4 to Benschar Ltr., at 1.

¹¹ See FAC ¶ 19.

¹² See *MediaCom Corp. v. Rates Tech. Inc.*, 4 F. Supp. 2d 17 (D. Mass. 1998) (“*MediaCom I*”); *MediaCom Corp. v. Rates Tech. Inc.*, 34 F. Supp. 2d 76 (D. Mass. 1998) (“*MediaCom II*”).

¹³ See Defendants’ Answering Claim Construction Brief (“Broadvox Brief”) at 1.

¹⁴ See *id.*; ‘085 Patent Reexamination Certificate C2, Ex. 3 to Benschar Ltr., col. 1 ll. 1-64; ‘769 Patent Reexamination Certificate C1, Ex. 5 to Benschar Ltr., col. 1 l. 15.

B. Claim Language

The full text of claim 1 of the ‘085 Patent, with the disputed phrases emphasized, follows:

A device for routing telephone calls along a least cost route originating from a first telephone to a second telephone having an associated telephone number via a network having a plurality of alternate communication switch paths corresponding to different carriers which can be chosen to route the call and normally providing a current to said first telephone when said first telephone is in use, comprising:

- [I] *a housing forming an enclosure and comprising first jack means for connection to said first telephone, and second jack means for connection to said network;*
- [ii] *switch means operatively connected to said first jack means for disconnecting said first telephone from said network during routing of a telephone call from said first telephone;*
- [iii] *means operatively connected to said switch means for generating a current through said switch means to the first telephone corresponding to a current provided by said network, when the first telephone is disconnected from said network by said switch means;*
- [iv] database means for storing billing rate parameters for determining a least cost communication path for call corresponding to said telephone number;
- [v] *means operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone;*
- [vi] *means for addressing said database means for identifying*

a plurality of communication switch paths to said second telephone and the cost rate of each path;

- [vii] *means actuated subsequent to the detection of said telephone number originating from said first telephone for comparing the cost rate of each path so as to determine a least cost route; and*
- [viii] *means operatively connected to said switch means and said second jack means for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack means to the selected communication path and carrier to establish a switched connection between said first telephone and said second telephone.¹⁵*

The full text of claim 1 of the ‘769 Patent, with the disputed phrases emphasized, follows:

A method for updating a database that stores billing rate parameters for a call rating device used for cost determinations for a calling station, comprising the steps of:

- [I] *connecting at a predetermined time and date via a data transfer line the call rating device to a rate provider having billing rate parameters for a plurality of calling stations;*
- [ii] *transmitting over the data transfer line indicia identifying the call rating device and the date and time of the last update of the billing rate parameters;*
- [iii] *verifying if billing parameters should be updated; and*
- [iv] *transmitting from the rate provider to the call rating device the updated billing rate parameters when the rate provider*

¹⁵ ‘085 Patent Reexamination Certificate C2 col. 1 ll. 1-64.

determines that an update is required.¹⁶

The parties agree on the construction of the following phrases:

TABLE 1¹⁷

| ‘085 Patent, Claim 1 | |
|---|---|
| Term/Phrase | Agreed Upon Construction |
| 1. “device” | The term should not be a limitation of the claim. |
| 2. “first jack means for connection to said first telephone” | First jack for connection to said first telephone. |
| 3. “second jack means for connection to said network” | Second jack for connection to said network. |
| ‘769 Patent, Claim 1 | |
| Term/Phrase | Agreed Upon Construction |
| 1. “a data transfer line” | a data transfer line (or path to transfer data) |
| 2. “indicia identifying the call rating device and the date and time of the last update of the billing rate parameters” | indicia identifying call rating device and the date and time of the last update of the billing rate parameters. |

The parties dispute the construction of the following phrases:

¹⁶ ‘769 Patent col. 6 ll. 35-49. The reexamination of the ‘769 Patent did not affect the language of claim 1.

¹⁷ The information in Table 1 is derived from Defendants’ First Revised Claim Terms Chart (“Claim Terms Chart”), Doc. No. 113.

TABLE 2¹⁸

| ‘085 Patent, Claim 1 | | |
|---|---|---|
| Term/Phrase | RTI’s Proposed Construction | Broadvox’s Proposed Construction |
| 1. “a housing forming an enclosure and comprising” | One or more housings forming one or more enclosures Comprising is a transition term linking the preamble to the body of the claim. | A unitary physical structure that includes a first jack for connection to a first telephone and a second jack for connection to a network |
| 2. “switch means operatively connected to said first jack means for disconnecting (as defined below) said first telephone from said network during routing of a telephone call from said first telephone” | switch operatively connected to said first jack for disconnecting said first telephone from said network during routing of a telephone call from said first telephone | This is a means-plus-function element, whose construction is governed by 35 U.S.C. § 112(f). The structure of the “switch means” is the “2 Form C switch.” It is referenced in the ‘085 Patent as item 36, and is described at col. 3 ll. 51-64, and Fig. 2. |
| 3. “disconnecting” | Ordinary meaning should control. In the context of specification and prosecution history, term should be | Interruption of the electrical circuit between the telephone and the network — the breaking or opening — of the electrical circuit between |

¹⁸ The information in Table 2 is derived from the Claim Terms Chart, the *Markman* hearing transcript (“Tr.”), and the parties’ post-hearing letters.

| '085 Patent, Claim 1 | | |
|---|--|---|
| Term/Phrase | RTI's Proposed Construction | Broadvox's Proposed Construction |
| | construed as “disconnecting the communication such as signaling” | the telephone jack and the network |
| 4. “means operatively connected to said switch means for generating a current (as defined below) through said switch means to the first telephone corresponding to a current provided by said network, when the first telephone is disconnected from said network to said switch means” | Current source operatively connected to said switch for generating a current through said switch to the first telephone corresponding to a current provided by said network, when the first telephone is disconnected from said network by said switch | This is a means-plus-function element, whose construction is governed by 35 U.S.C. § 112(f). The structure of the “means” is the structure shown in the Fig. 2 drawing as connecting item 38, as well as the structure of item 38. |
| 5. “means for generating a current” | Current source for generating a current | This is a means-plus-function element, whose construction is governed by 35 U.S.C. § 112(f). The structure of the “means” is the structure shown in the Fig. 2 drawing as connecting item 38, as well as the structure of item 38. |
| 6. “means | Detecting and storing | This is a means-plus- |

| ‘085 Patent, Claim 1 | | |
|---|--|--|
| Term/Phrase | RTI’s Proposed Construction | Broadvox’s Proposed Construction |
| “operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone” | logic (e.g., routine or subroutine) operatively connected to said switch for detecting and storing said telephone number originating from the first telephone | function element, whose construction is governed by 35 U.S.C. § 112(f). The structure of the “means operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone” is a combination of: “the DTMF tone detector 88” for detecting a telephone number, and an unknown and indefinite structure for “storing said telephone number originating from the first telephone.” |
| 7. “means for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path” | Database addressing logic (e.g., routine or subroutine) for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path | This is a means-plus-function element, whose construction is governed by 35 U.S.C. § 112(f). The structure of the “means for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path” is the algorithm at col. 6 ll. 7-47 and Fig. 5. |

| '085 Patent, Claim 1 | | |
|--|--|--|
| Term/Phrase | RTI's Proposed Construction | Broadvox's Proposed Construction |
| 8. "means actuated subsequent to the detection of said telephone number originating from said first telephone for comparing the cost rate of each path so as to determine a least cost route" | Comparing logic (e.g., routine or subroutine) actuated subsequent to the detection of said telephone number originating from said first telephone for comparing the cost rate of each path so as to determine a least cost route. | <p>This is a means-plus-function element, whose construction is governed by 35 U.S.C. § 112(f).</p> <p>The element "means actuated subsequent to the detection of said telephone number originating from said first telephone for comparing the cost rate of each path so as to determine a least cost route" is not described in the specification and, therefore, this claim term is indefinite.</p> |
| 9. "means operatively connected to said switch means and said second jack means for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack means to the selected communication path and carrier to | logic (e.g. routine or subroutine) operatively connected to said switch and said second jack for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack to the selected communication path and carrier to establish a switched | <p>This is a means-plus-function element, whose construction is governed by 35 U.S.C. § 112(f).</p> <p>The structure is the combination of a tone generator with a crystal oscillator (which generates the number sequence), and an analog switch (so that "call is routed through said second jack means to the selected communication</p> |

| '085 Patent, Claim 1 | | |
|---|--|---|
| Term/Phrase | RTI's Proposed Construction | Broadvox's Proposed Construction |
| establish a switched connection between said first telephone and said second telephone” | connection between said first telephone and said second telephone. | path . . .”). |
| '769 Patent, Claim 1 | | |
| Term/Phrase | RTI's Proposed Construction | Broadvox's Proposed Construction |
| 1. “at a predetermined time and date” | at a predetermined time and date | The time and date for calling the rate provider are selected a substantial period in advance of the call |
| 2. “call rating device” | call rating device | <p>This is a means-plus-function element, whose construction is governed by 35 U.S.C. § 112(f).</p> <p>An identifiable physical component having the function of receiving rate information from a rate provider over a data transfer line, incorporating the rate information and thereafter managing calls over the least cost routing route.</p> |
| 3. “transmitting over the data transfer line” | transmitting over the data transfer line | conveying information over the same wire operatively connected to a |

| '769 Patent, Claim 1 | | |
|--|---|---|
| Term/Phrase | RTI's Proposed Construction | Broadvox's Proposed Construction |
| | | call rating device on one end and a phone network on the other |
| 4. "verifying if billing rate parameters should be updated" | verifying if billing rate parameters should be updated | the rate provider, based on the information received from the call rating device, verifies if the billing rate parameters of the call rating device should be updated |
| 5. "transmitting from the rate provider to the call rating device" | transmitting from the rate provider to the call rating device | the rate provider, based on the information received from the call rating device, transmits the billing rate parameters to the call rating device |

III. APPLICABLE LAW

Analysis of a patent infringement claim involves two steps: (1) construction of the terms of the asserted claims and (2) determination of whether the accused device infringes the claims, as construed.¹⁹ Claim construction is a

¹⁹ See *Metabolite Labs., Inc. v. Laboratory Corp. of Am. Holdings*, 370 F.3d 1354, 1360 (Fed. Cir. 2004).

question of law,²⁰ the purpose of which is to determine what is covered by an asserted claim. In other words, “[t]he construction of claims is simply a way of elaborating the normally terse claim language in order to understand and explain, but not to change, the scope of the claims.”²¹

The Federal Circuit has made clear that “there is no magic formula or catechism for conducting claim construction.”²² Thus, courts must be mindful that “applying [the substantive precepts of patent claim interpretation] to the facts of a case can be . . . perplexing, particularly where precepts can be in opposition to one another and district judges cannot always tell which one(s) apply in a particular case.”²³ As such, the Federal Circuit has provided district courts with some guidance:

[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application. . . . [This inquiry]

²⁰ See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 384 (1996).

²¹ *Terlep v. Brinkmann Corp.*, 418 F.3d 1379, 1382 (Fed. Cir. 2005) (internal citations omitted).

²² *Phillips v. AWH Corp.*, 415 F.3d 1303, 1324 (Fed. Cir. 2005) (en banc).

²³ Edward D. Manzo, *Claim Construction in the Federal Circuit* § 1.2 (2009).

provides an objective baseline from which to begin claim interpretation. . . . Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.²⁴

To determine how a person skilled in the art understands a disputed claim term, courts should look to publicly available sources, including intrinsic evidence — such as “the words of the claims themselves, the remainder of the specification, the prosecution history” — and “extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.”²⁵

A. Intrinsic Evidence

The Federal Circuit views intrinsic evidence as “a more reliable guide to the meaning of a claim term than are extrinsic sources.”²⁶ Thus, district courts should use the intrinsic record as “the primary tool to supply the context for interpretation of disputed claim terms.”²⁷

1. Claim Language

²⁴ *Phillips*, 415 F.3d at 1313 (citations omitted).

²⁵ *Id.* at 1314 (internal citations omitted).

²⁶ *Chamberlain Grp., Inc. v. Lear Corp.*, 516 F.3d 1331, 1335 (Fed. Cir. 2008) (citing *Phillips*, 415 F.3d at 1318-319).

²⁷ *V-Formation, Inc. v. Benetton Grp. SpA*, 401 F.3d 1307, 1310 (Fed. Cir. 2005).

Although there is no rigid formula to claim construction, “[j]udicial interpretation must begin with and remain focused upon the ‘words of the claims themselves . . . to define the scope of the patented invention.’”²⁸ On occasion, “the ordinary meaning of claim language as understood by a person of skill in the art” will be so apparent from the claim language itself that no further inquiry is needed.²⁹ However, even when the terms in a claim are self-explanatory, “[t]he context in which a term is used in the asserted claim can be highly instructive.”³⁰

2. The Specification

In addition to the claim itself, a patent is required by statute to “contain a written description of the invention . . .”³¹ This description — known as the specification³² — includes: “an abstract of the invention; a description of the

²⁸ *Investment Tech. Grp., Inc. v. Liquidnet Holdings, Inc.*, No. 07 Civ. 510, 2010 WL 199912, at *2 (S.D.N.Y. Jan. 19, 2010) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

²⁹ *Phillips*, 415 F.3d at 1314.

³⁰ *Id.*

³¹ 35 U.S.C. § 112.

³² See *Medisim Ltd. v. BestMed LLC*, No. 10 Civ. 2463, 2011 WL 2693896, at *3 n.28 (S.D.N.Y. July 8, 2011) (“The terminology used to describe the parts of a patent can be slightly confusing. Technically, the specification includes both the claims and the written description. However, courts typically use the term specification to refer to the written description on its own and as distinct from the claims. For purposes of consistency, I adopt this common usage.”).

invention's background; a summary of the invention; patent drawings; and a detailed description that discusses preferred embodiments of the invention.”³³ The Federal Circuit has said that specifications are “always highly relevant to the claim construction analysis” and therefore “claims must be read in view of the specification, of which they are a part.”³⁴

However, courts must be mindful that while “using the specification to interpret the meaning of a claim” is permissible, “importing limitations from the specification into the claim” is not.³⁵ Because words of the claim alone “define the scope of the right to exclude,”³⁶ the specification should generally be used to limit a claim only:

- (1) if the claim “explicitly recite[s] a term in need of definition”; or (2) if the specification unambiguously defines a term, *i.e.*, if “a patent applicant has elected to be a lexicographer by providing an explicit definition in the specification for a claim term.”³⁷

³³ *Id.* at *3.

³⁴ *Phillips*, 415 F.3d at 1315 (quotation marks and citations omitted). In fact, a claim interpretation that excludes a preferred embodiment described in the specification is “rarely, if ever, correct.” *Vitronics*, 90 F.3d at 1583.

³⁵ *Phillips*, 415 F.3d at 1323.

³⁶ *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998).

³⁷ *Medisim*, 2011 WL 2693896, at *4 (quoting *Renishaw*, 158 F.3d at 1248-49).

Even then, “there will still remain some cases in which it will be hard to determine whether a person of skill in the art would understand the embodiments to define the outer limits of the claim term or merely to be exemplary in nature.”³⁸

3. Prosecution History

The prosecution history of a patent is part of the “intrinsic evidence” and “consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent.”³⁹ “[B]ecause the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.”⁴⁰ Nonetheless, “[l]ike the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent,” and accordingly, “can often inform the meaning of the claim language.”⁴¹

Furthermore, the prosecution history “may be given substantial weight

³⁸ *Phillips*, 415 F.3d at 1323.

³⁹ *Id.* at 1317 (citation omitted).

⁴⁰ *Id.*

⁴¹ *Id.*

in construing a term where that term was added by amendment.”⁴² This is because changes made to the claim terms during the prosecution history “demonstrat[e] how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.”⁴³ As such, “[w]hen the patentee unequivocally and unambiguously disavows a certain meaning to obtain a patent, the doctrine of prosecution history disclaimer narrows the meaning of the claim consistent with the scope of the claim surrendered.”⁴⁴ The doctrine applies even where the patentee’s statements are not “necessary or persuasive” to the PTO.⁴⁵

B. Extrinsic Evidence

The extrinsic record “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.”⁴⁶ Although the Federal Circuit allows district courts to “rely on

⁴² *Board of Regents of the Univ. of Tex. Sys. v. BENQ Am. Corp.*, 533 F.3d 1362, 1369 (Fed. Cir. 2008).

⁴³ *Phillips*, 415 F.3d at 1317.

⁴⁴ *Biogen Idec, Inc. v. GlaxoSmithKline LLC*, 713 F.3d 1090, 1095 (Fed. Cir. 2013).

⁴⁵ *Uship Intellectual Props., LLC v. United States*, 714 F.3d 1311, 1315 (Fed. Cir. 2013).

⁴⁶ *Phillips*, 415 F.3d at 1317 (internal citations omitted).

extrinsic evidence,” it views “extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to read claim terms.”⁴⁷

“Generally, a patent’s intrinsic record does not warrant consideration of extrinsic evidence.”⁴⁸ “Where a patent’s claims, written description, and prosecution history are complete and unambiguous, a court need not resort to extrinsic evidence such as treatises, technical references, or expert testimony.”⁴⁹ But “[w]here the intrinsic record leaves ambiguities and unresolved questions . . . a court may consider extrinsic evidence, including expert testimony.”⁵⁰

The Federal Circuit has noted that “the decision as to the need for and use of experts is within the sound discretion of the district court.”⁵¹ It is unhelpful if an expert “simply recites how [he] would construe [a term] based on his own reading of the specification.”⁵² On the other hand, expert reports and testimony

⁴⁷ *Id.* at 1317-318.

⁴⁸ *BASF Agro B.V. v. Makhteshim Agan of No. Am. Inc.*, 519 Fed. App’x 1008, 1015 (Fed. Cir. 2013).

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *Inpro II Licensing, S.A.R.L. v. T-Mobile USA, Inc.*, 450 F.3d 1350, 1357 (Fed. Cir. 2006).

⁵² *Symantec Corp. v. Computer Assocs. Int’l, Inc.*, 522 F.3d 1279, 1291 (Fed. Cir. 2008). *Accord Phillips*, 415 F.3d at 1318 (“[C]onclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court.”).

can help the court by:

[providing] background on the technology at issue, [explaining] how an invention works, [ensuring] that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or [establishing] that a particular term in the patent or the prior art has a particular meaning in the pertinent field.⁵³

With this in mind, “a court should discount any expert testimony ‘that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent.’”⁵⁴ “Even if the judge permissibly decide[s] to hear all the possible evidence before construing the claim, the expert testimony, which [is] inconsistent with the specification and file history, should [be] accorded no weight.”⁵⁵

C. Means-Plus-Function

“Section 112(f) [of Title 35] allows patentees to put structural details into the specification and build into the literal coverage of the claim a certain scope for equivalents in performing a defined function.”⁵⁶ Section 112(f) states:

⁵³ *Id.*

⁵⁴ *Id.* (quoting *Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998)).

⁵⁵ *BASF*, 519 Fed. App'x at 1016 (citing *Vitronics*, 90 F.3d at 1584).

⁵⁶ *Ibormeith IP, LLC v. Mercedes-Benz USA, LLC*, 732 F.3d 1376, 1379 (Fed. Cir. 2013).

An element in a claim for combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.⁵⁷

This form of claiming, known as means-plus-function claiming, applies to “purely functional limitations that do not provide the structure that performs the recited function.”⁵⁸ It “represents a quid pro quo by permitting inventors to use a generic means expression for a claim limitation provided that the specification indicates what structure(s) constitute(s) the means.”⁵⁹

“[W]hether the limitation in question should be regarded as a means-plus-function limitation, like all claim construction issues, is a question of law for the court, even though . . . evidence from experts may be relevant.”⁶⁰ As with any claim term, a court examines “the words of the claims themselves, the written

⁵⁷ 35 U.S.C. § 112(f). Section 112(f) was formerly known as 35 U.S.C. § 112, ¶ 6. See *Bennett Marine, Inc. v. Lenco Marine, Inc.*, No. 2013 WL 5273116, at *4 (— Fed. App’x —) (Fed. Cir. Sept. 19, 2013).

⁵⁸ *Phillips*, 415 F.3d at 1311.

⁵⁹ *Chicago Bd. Options Exch. v. Interntional Sec. Exch.*, 677 F.3d 1361, 1367 (Fed. Cir. 2012) (internal citations omitted).

⁶⁰ *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004).

description, the prosecution history, and any relevant extrinsic evidence.”⁶¹ “[W]hether claim language invokes Section 112, ¶ 6 depends on how those skilled in the art would understand the structural significance of that claim language, assessed against the presumptions that flow from a drafter’s choice to employ or not employ the term ‘means.’”⁶²

The Federal Circuit has established “two guidelines for determining whether the special rules of claim construction set forth in Section 112, ¶ 6 apply to a given claim limitation.”⁶³ *First*, “use of the word ‘means’ creates a rebuttable presumption that the drafter intended to invoke Section 112, ¶ 6.”⁶⁴ A challenger may rebut the presumption where a claim recites a function “but then goes on to elaborate sufficient structure, material, or acts within the claim itself to perform entirely the recited function.”⁶⁵ In such a case, “the claim is not in means-plus-

⁶¹ *Inventio AG v. ThyssenKrupp Elevator Americas Corp.*, 649 F.3d 1350, 1356 (Fed. Cir. 2011).

⁶² *Id.* at 1360. *Accord Rembrandt Data Techs., LP v. AOL LLC*, 641 F.3d 1331, 1341 (Fed. Cir. 2011) (“When determining whether a claim term recites sufficient structure, we examine whether it has an understood meaning in the art.”).

⁶³ *Flo Healthcare Solutions, LLC v. Kappos*, 697 F.3d 1367, 1373 (Fed. Cir. 2012).

⁶⁴ *Id.*

⁶⁵ *Id.* (internal citations omitted).

function format even if the claim uses the term means.”⁶⁶

Conversely, “[i]f a claim term does not use the word ‘means,’ we presume that means-plus-function claiming does not apply.”⁶⁷ “[T]he presumption flowing from the absence of the term ‘means’ is a strong one that is not readily overcome.”⁶⁸ In deciding whether a challenger has rebutted the presumption, “the focus remains on whether the claim as properly construed recites sufficiently definite structure to avoid the ambit of § 112, ¶ 6.”⁶⁹ The Federal Circuit requires only that “the claim term be used in common parlance or by ordinarily skilled artisans to designate sufficiently definite structure, ‘even if the term covers a broad class of structures.’”⁷⁰ “If, however, the claim term recites a function without reciting sufficient structure for performing that function, the presumption falls and means-plus-function claiming applies.”⁷¹

Construction of a means-plus-function limitation involves two steps.

⁶⁶ *Id.* (internal citations omitted).

⁶⁷ *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 711 F.3d 1348, 1364 (Fed. Cir. 2013) (internal citation omitted).

⁶⁸ *Inventio*, 649 F.3d at 1356.

⁶⁹ *Id.* (internal citations omitted).

⁷⁰ *Power Integrations*, 711 F.3d at 1965 (quoting *Lighting World*, 382 F.3d at 1359–360).

⁷¹ *Id.* at 1364.

“First, the court must determine the claimed function.”⁷² “Second, the court must identify the corresponding structure in the written description of the patent that performs the function.”⁷³ “A structure disclosed in the specification qualifies as a ‘corresponding structure’ if the specification or the prosecution history clearly links or associates that structure to the function recited in the claim.”⁷⁴

D. Indefiniteness

“Whether a claim complies with the definiteness requirement of 35 U.S.C. § 112 ¶ 2 is a matter of claim construction.”⁷⁵ Section 112, ¶ 2 states:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.⁷⁶

Under this section, the inventor has a duty to “inform the public of the bounds of the protected invention, i.e., what subject matter is covered by the exclusive rights of the patent.”⁷⁷ An inventor’s failure to “particularly point[] out and distinctly

⁷² *Noah Sys., Inc. v. Intuit, Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012) (internal citation omitted).

⁷³ *Id.*

⁷⁴ *Id.* (internal citation and quotation marks omitted).

⁷⁵ *Id.*

⁷⁶ 35 U.S.C. § 112 ¶ 2 is now known as 35 U.S.C. § 112(b).

⁷⁷ *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008) (citation omitted).

claim[]” the subject matter of her invention renders the claim invalid.⁷⁸

Patents issued by the PTO enjoy a presumption of validity,⁷⁹ and so indefiniteness must be proved by clear and convincing evidence.⁸⁰ Whether a claim is indefinite is a question of law,⁸¹ although “[e]xpert testimony may be helpful in making this determination.”⁸² “A claim is definite if one skilled in the art would understand the bounds of the claim when read in light of the specification.”⁸³ “A claim is not indefinite merely because it is difficult to construe.”⁸⁴ To be indefinite, it must be such that “no narrowing construction can properly be adopted” to interpret the claim.⁸⁵

⁷⁸ *Id.*

⁷⁹ See 35 U.S.C. § 282.

⁸⁰ See *Technology Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1338 (Fed. Cir. 2008).

⁸¹ See *Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 949 (Fed. Cir. 2007).

⁸² *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1380 (Fed. Cir. 2011) (“*Star Scientific II*”).

⁸³ *IGT v. Bally Gaming Intern., Inc.*, 659 F.3d 1109, 1119 (Fed. Cir. 2011) (internal citations omitted).

⁸⁴ *Dow Chem. Co. v. Nova Chems. Corp.*, 458 Fed. App’x 910, 917 (Fed. Cir. 2012) (internal citations omitted).

⁸⁵ *Id.*

If a means-plus-function limitation lacks a “structure disclosed in the specification to perform those functions, the claim limitation would lack specificity, rendering the claim as a whole invalid for indefiniteness.”⁸⁶ A structure disclosed in the specification qualifies as a “corresponding structure” if the specification or the prosecution history “clearly links or associates that structure to the function recited in the claim.”⁸⁷ “Even if the specification discloses a ‘corresponding structure,’ the disclosure must be adequate . . . [to] show[] what is meant by that [claim] language.”⁸⁸ “[T]he testimony of one of ordinary skill in the art cannot supplant the total absence of structure from the specification.”⁸⁹

IV. DISCUSSION

A. General Claim Construction Issues

At the *Markman* hearing and in their briefs, the parties disagreed on several claim construction issues. Because the issues pertain to claim construction in general, I will address them before construing the individual terms.

1. RTI’s Expert

⁸⁶ *Aristocrat Techs., Australia Pty Ltd. v. International Game Tech.*, 521 F.3d 1328, 1331 (Fed. Cir. 2008).

⁸⁷ *Noah Sys.*, 675 F.3d at 1311 (internal citation omitted).

⁸⁸ *Id.*

⁸⁹ *Id.* at 1312 (internal citation omitted).

Broadvox argues that the Court should not consider the declaration of RTI's expert, Bradley Walton.⁹⁰ *First*, Broadvox objects that Walton's opinions are conclusory and contradict the intrinsic record.⁹¹ RTI responds that Walton reviewed the relevant claims, specification, and prosecution history to form his opinions.⁹² RTI notes that Walton is an electrical engineer in the telecommunications field, i.e., a person of ordinary skill in the art.⁹³ Broadvox's objections are overruled. Expert testimony may be useful to the Court in construing RTI's claims.⁹⁴ If I find that a construction proposed by Walton contradicts the intrinsic evidence, I will simply discount it.

Second, Broadvox argues that Walton's opinion is irrelevant because he failed to examine the entire prosecution history, specifically the reexaminations of the patents-in-suit.⁹⁵ But at the *Markman* hearing, Mr. Spencer — counsel for

⁹⁰ See Broadvox Brief at 7-8.

⁹¹ See *id.*

⁹² See RTI's Reply Claim Construction Brief ("RTI Reply") at 3.

⁹³ See *id.*

⁹⁴ See *MediaCom I*, 4 F. Supp. 2d at 29 ("Claim1 [of the '085 Patent] presents questions that are sufficiently complex and technical that the Court would be remiss to impose its lay understanding on this patent claim without the benefit of expert guidance.").

⁹⁵ See 12/19/13 Letter of George Pazuniak, Broadvox's Counsel, to the Court ("12/19/13 Pazuniak Ltr.") at 2.

RTI — represented that he had personal knowledge that Walton reviewed “the entire prosecution history.”⁹⁶ Thus, I will consider Walton’s opinions, including his determination of whether means-plus-function applies to certain terms.

2. Prior Judicial Construction of Claim Terms

The parties next disagree on the precedential effect of the *MediaCom* cases, in which Judge Young construed several of the claim terms at issue here. Broadvox contends that this Court is bound by the prior constructions under *stare decisis*.⁹⁷ RTI urges this Court not to follow the *MediaCom* opinions, given that they were interlocutory and decided prior to the reexaminations.⁹⁸ While I am certainly not bound by the *MediaCom* opinions, I find them persuasive.⁹⁹ As I stated at the *Markman* hearing:

RTI was [before Judge Young in the *MediaCom* cases] and had a full and fair opportunity to litigate. It sounds like estoppel almost. . . . [RTI] litigated that very claim term fully, completely, and the Court spent a lot of time on it, had this expert, made a record, issued two decisions. That’s pretty persuasive to me.¹⁰⁰

⁹⁶ Tr. at 12:2-7.

⁹⁷ See 12/19/13 Pazuniak Ltr. at 4.

⁹⁸ See RTI Reply at 9.

⁹⁹ See *TM Patents, L.P. v. International Bus. Machs., Corp.*, 72 F. Supp. 2d 370, 375 (S.D.N.Y. 1999) (applying collateral estoppel where same claims were previously construed in *Markman* hearing by the District Court of Massachusetts).

¹⁰⁰ Tr. at 18:10-15.

Moreover, as Broadvox notes, “the *MediaCom* cases were decided before the subsequent reexaminations, where RTI was forced to overcome new prior art.”¹⁰¹ Thus, the prior constructions are more favorable to RTI, than they would be today.

3. Effect of Prosecution History

Next, RTI argues that, for purposes of claim construction, it is not bound by statements it made to the PTO Board of Appeals.¹⁰² RTI cites no case law to support its assertion, and I see no reason why RTI’s statements to the PTO Appeals Board should not give rise to a prosecution disclaimer where they “unequivocally and unambiguously disavow[] a certain meaning . . .”¹⁰³

Finally, RTI argues that prosecution history statements are never relevant to the determination of whether “means-plus-function” claiming applies.¹⁰⁴ RTI cites only to *Robinson v. Cannondale Corporation*, where the Federal Circuit

¹⁰¹ 12/19/13 Pazuniak Ltr. to the Court at 4.

¹⁰² See Tr. at 21:19-25, 22:1-2.

¹⁰³ *Biogen Idec, Inc.*, 713 F.3d at 1095. *Accord* Tr. at 22:3-4 (The Court: “[A statement made to the Appeals Board] is still a statement made to the patent office by the patentee.”).

¹⁰⁴ See RTI Reply at 12 (citing *Robinson v. Cannondale Corp.*, 81 Fed. App’x 725, 728 (Fed. Cir. 2003) (“Because th[e] inquiry focuses on the claim language, . . . arguments regarding alleged admissions in the prosecution history . . . are immaterial in evaluating whether the means-plus-function presumption is rebutted.”)).

found that means-plus-function did not apply to a claim that used the word “means” because it recited sufficient structure to perform the function.¹⁰⁵ In that case, the court did not need to examine the prosecution history because the claim language clearly recited the claimed structure.¹⁰⁶ This does not mean that prosecution history is never relevant to the determination of whether means-plus-function applies. To the contrary, under Federal Circuit law, it generally is.¹⁰⁷

B. Disputed Constructions for Claim 1 of the ‘085 Patent

1. “a housing forming an enclosure and comprising”

¹⁰⁵ See *Robinson*, 81 Fed. App’x at 728.

¹⁰⁶ See *Middleton, Inc.*, 311 F.3d at 1387 (“[T]he most important indicator of the meaning of [a disputed claim term] is its usage and context in the claim itself.”). Moreover, in *Robinson*, the “admissions in the prosecution history did not pertain to [the claim at issue]” but to an entirely different claim. *Robinson*, 81 Fed. App’x at 728.

¹⁰⁷ See, e.g., *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531 (Fed. Cir. 1996) (“We decide on an element-by-element basis, based upon the patent *and its prosecution history*, whether Section 112, ¶6 applies.”) (emphasis added); *Kreepy Krauly U.S.A., Inc. v. Sta-Right Indus., Inc.*, 152 F.3d 949, at *3 (Fed. Cir. 1998) (unpublished opinion) (concluding that “[n]othing in [the claim at issue] or the prosecution history suggests that the claim language at issue was intended to be construed in means-plus-function form”); *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1584 (Fed. Cir. 1996) (considering prosecution history to determine whether means-plus-function applies).

RTI argues that “a housing forming an enclosure and comprising” should be construed as “one or more housings forming one or more enclosures.”¹⁰⁸ Broadvox proposes “a unitary physical structure that includes a first jack for connection to a first telephone and a second jack for connection to a network.”¹⁰⁹ The difference between the proposed constructions is whether both the first and second jack means must be contained in a single housing.

I begin with the intrinsic evidence. The plain language of the claim is consistent with the specification and prosecution history and indicates a single housing enclosing both the first and second jack means. The claim refers to “[a] housing forming an enclosure and comprising first jack means for connection to said second jack means . . .”¹¹⁰ The patent’s abstract states, “[t]he device components are contained in the enclosure.”¹¹¹ Figure 7 illustrates a single housing forming an enclosure connected to a first jack means and a second jack means.¹¹² Finally, other parts of the specification use similar language, such as “[a] housing forms an enclosure and has jacks mounted on the housing . . . [a] first jack

¹⁰⁸ RTI’s Opening Claim Construction Brief (“RTI Brief”) at 10.

¹⁰⁹ Broadvox Brief at 15.

¹¹⁰ ‘085 Patent col. 7 ll. 9-12.

¹¹¹ *Id.* col. 1 ll. 63-64.

¹¹² See *id.* Fig. 7.

interconnects to the phone side of the phone line and a second jack interconnects to the network side of the phone line.”¹¹³ Broadvox agrees with RTI, however, that the claimed device can have more than one “housing forming an enclosure.”¹¹⁴ Therefore, I define “a housing forming an enclosure” to mean “a unitary physical structure that includes a first jack for connection to a first telephone and a second jack for connection to a network. A claimed device may have more than one housing forming an enclosure, as defined above.”

2. “switch means operatively connected to said first jack means for disconnecting said first telephone from said network during routing of a telephone call from said first telephone”

The parties disagree on whether “switch means” is a means-plus-function limitation governed by Section 112(f). In *MediaCom I*, Judge Young ruled that it is not, reasoning:

Although the switch means element employs “means of ___ing” language, it is not a means-plus-function claim, because it describes the structure that supports the disconnecting function (i.e. a switch or switches). Not only is the structure named, but it is described as connected to an adjacent structure, the first jack. Because this element of claim 1 recites a definite structure, it is not a means-plus-function claim element.¹¹⁵

¹¹³ *Id.* col. 1 ll. 59-63.

¹¹⁴ Tr. at 44:19-21, 45:11-12.

¹¹⁵ *MediaCom I*, 4 F. Supp. 2d at 27 (internal citations omitted).

In construing “switch means,” Judge Young observed that “[a]lthough the switch means claim element is not limited by the structure shown in the specification, the specification nevertheless informs construction of the terms in the claim.”¹¹⁶ He concluded that “[n]o special definition appears in the specification to indicate that the words ‘switch’ or ‘disconnect’ are to be understood in any way other than their ordinary meanings.”¹¹⁷ At the *Markman* hearing, Broadvox conceded that the subsequent reexaminations did not change the claim language.¹¹⁸ Thus, I see no reason why *MediaCom I* should not control and therefore conclude that this phrase is not governed by the means-plus-function limitation of Section 112(b). I define the phrase as: “switch operatively connected to said first jack for disconnecting said first telephone from said network during routing of a telephone call from said first telephone.”

3. “disconnecting”

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ See Tr. at 61:10 (Pazuniak: “There is no change in the language.”). In fact, the phrase “during the routing of said first telephone” was added during the reexamination. But this language relates to timing and is irrelevant to whether “switch means” connotes a sufficient structure to rebut the presumption that Section 112(f) applies.

Within the “switch means” phrase, the parties dispute the meaning of the word “disconnecting.” Again, the *MediaCom* decisions are instructive. In *MediaCom II*, Judge Young construed “disconnecting” to mean, “the interruption—the breaking or opening—of the electrical circuit between the telephone jack and the network.”¹¹⁹ Broadvox urges this construction and RTI offers no good reason why I should not adopt it.¹²⁰ Thus, I construe “disconnecting” as “the interruption—the breaking or opening—of the electrical circuit between the telephone jack and the network.”

4. & 5. “means operatively connected to said switch means for generating a current through said switch means to the first telephone corresponding to a current provided by said network, when the first telephone is disconnected from said network to said switch means”¹²¹

The parties again disagree on whether the phrase is a “means-plus-function” limitation.¹²² The court in *MediaCom I* answered as follows:

¹¹⁹ *MediaCom II*, 34 F. Supp. 2d at 81.

¹²⁰ RTI argues that Judge Young’s construction is not persuasive because he “didn’t address the particular question of infringement.” Tr. at 62:24-25. But, like Judge Young, I am not addressing infringement during the claim construction stage.

¹²¹ Term 5 is “means for generating a current.” At the *Markman* hearing, the parties agreed to construe terms 4 and 5 together. *See* Tr. at 89:6-25, 90:1-2.

¹²² *See* Broadvox Brief at 23.

As a preliminary matter, this Court construes the generating means element of the claim as a means-plus-function element because it describes no particular structure for performing the function of generating a current corresponding to a current provided by the network.¹²³

The court then looked to the specification to find a description of the structure that generates current.¹²⁴ After examining the intrinsic evidence, the court concluded that “claim 1 presents questions that are sufficiently complex and technical that the court would be remiss to impose its lay understanding on this patent claim without the benefit of expert guidance.”¹²⁵ In *MediaCom II*, the court returned to the phrase. After considering the testimony of RTI’s expert, Stephen Burns, the court construed the phrase as “an intermediate element that conditions or regulates electrical power from a more distant source so that it corresponds to the current that would otherwise have been provided directly by the telephone network, and passes the current through the switch to power the telephone.”¹²⁶

RTI argues that even if the term is a means-plus-function limitation, Walton opined that “current source is the level of detail that the artisan would need

¹²³ *MediaCom I*, 4 F. Supp. 2d at 28.

¹²⁴ *See id.*

¹²⁵ *Id.* at 29.

¹²⁶ *MediaCom II*, 34 F. Supp. 2d at 82.

to know what performs the function.”¹²⁷ But as I said at the *Markman* hearing, Walton may not add language to the claim.¹²⁸ Moreover, Judge Young construed the term with the benefit of RTI’s previous expert. I therefore adopt Judge Young’s construction.¹²⁹ I construe “means operatively connected . . . switch means” as “an intermediate element that conditions or regulates electrical power from a more distant source so that it corresponds to the current that would otherwise have been provided directly by the telephone network, and passes the current through the switch to power the telephone.”

6. “means operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone”

Once again, the parties debate whether this term is a means-plus-function limitation. Because the term uses the word “means,” there is a presumption that Section 112(f) applies.¹³⁰ To rebut the presumption, RTI contends that “the artisan understands the terms ‘detecting’ and ‘storing’ as

¹²⁷ Tr. at 85:1-3.

¹²⁸ See *id.* at 83:25, 84:1-6.

¹²⁹ As with “switch means,” the subsequent reexaminations do not change the analysis. Although the phrase “when the first telephone is disconnected from said network by said switch means” was added in the reexamination, it relates to timing, not structure.

¹³⁰ See *Flo Healthcare*, 697 F.3d at 1373.

describing or defining a class of logic operations (i.e., structures) that detect and store.”¹³¹ RTI urges that the phrase be construed as “logic operatively connected to a switch for detecting and storing a telephone number originating from the telephone.”¹³² RTI explains that “logic” refers to a “software program.”¹³³ As the Federal Circuit has held:

[B]ecause general purpose computers can be programmed to perform very different tasks in very different ways, simply disclosing a computer as the structure designated to perform a particular function does not limit the scope of the claim to the corresponding structure, material, or acts that perform the function, as required by Section 112(f).¹³⁴

Here, “logic” refers to no structure. Because RTI has engaged in “pure functional claiming,” Section 112(f) applies.¹³⁵

The first step in construing a means-plus-function limitation is to “determine the claimed function.”¹³⁶ Because the parties urge no particular meaning of the words used to recite the function, the Court gives them their

¹³¹ RTI Brief at 14.

¹³² *Id.*

¹³³ Tr. at 93:5-8.

¹³⁴ *Aristocrat*, 521 F.3d at 1333.

¹³⁵ *Id.*

¹³⁶ *Noah Sys*, 675 F.3d at 131.

ordinary meaning.¹³⁷ Thus, looking only at the language of the claim without narrowing its scope, I construe the function as “detecting and storing said telephone number originating from the first telephone.”

Next, “the court must identify the corresponding structure in the written description of the patent that performs the function.”¹³⁸ Broadvox and RTI surprisingly cite to the same sections of the specification for the structure, column 4 lines 40-43, which states, “[t]he dial tone detect circuit 86 connects to the line coming from the polarity guard 42 and connects to the line detector 40. The DTMF tone detector 88 detects the tones generated from the first phone.”¹³⁹ Based on a reading of the full specification, the DTMF tone detector (88) detects *and saves* any digit it detects, other than the pound sign.¹⁴⁰

Broadvox further notes that during the ‘085 Patent reexamination, RTI urged that the phrase be construed as a means-plus-function element and identified the structure as “Ref No. 88, Col. 4, lines 40-43, Fig. 2.”¹⁴¹ Based on the

¹³⁷ See, e.g., *Versa Corp. v. Ag-Bag Intern. Ltd.*, 66 Fed. App’x 853, 855 (Fed. Cir. 2003).

¹³⁸ *Noah Sys.*, 675 F.3d at 1311 (internal citation omitted).

¹³⁹ Broadvox Brief at 25; RTI Brief at 15.

¹⁴⁰ See ‘085 Patent col. 5 ll. 64-67.

¹⁴¹ See Broadvox Brief at 25 (citing ‘085 Patent Reexamination Proceeding at 265, 267, 269). See also *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d

specification and prosecution history, I define the function as “detecting and storing said telephone number originating from the first telephone.” I construe the corresponding structure as described in column 4 lines 40-43 and as displayed in Figure 2. The dial tone detect circuit (86) connects to the line coming from the polarity guard (42) and connects to the line detector (40). The DTMF tone detector (88) detects and saves tones generated from the first phone.

7. “means for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path”

The term “means” gives rise to a presumption that Section 112(f) applies.¹⁴² Despite the presumption, RTI argues that the artisan understands the term “database” as connoting sufficient structure.¹⁴³ As such, RTI’s proposed construction for the term is “logic for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path.”¹⁴⁴ However, “[i]t is not enough for the patentee simply to state or later argue that persons of ordinary skill in the art would know what

1448, 1457 (Fed. Cir. 1998) (en banc) (“Prosecution history is relevant to the construction of a claim written in means-plus-function form.”).

¹⁴² See *Flo Healthcare*, 697 F.3d at 1373.

¹⁴³ See RTI Brief at 15.

¹⁴⁴ *Id.*

structures to use to accomplish the claimed function.”¹⁴⁵ Because the claim language itself provides no structure, Section 112(f) applies.

First, because the parties urge no particular meaning of the words that recite the function, the Court gives them their ordinary meaning. Thus, the claimed function is “addressing a database that identifies a plurality of communication switch paths to said second telephone and the cost rate of each path.”

Second, the corresponding structure is the algorithm disclosed in the specification column 6 lines 7-47 and Figure 5.¹⁴⁶ In the reexamination, RTI identified the structure as “Ref. No. 50, Col. 6 lines 2-30, Fig. 5.”¹⁴⁷ However, column 6 lines 7-47 recites the entire structure required to perform the function.

Based on the specification and prosecution history, I construe the phrase to perform the function of “addressing a database that identifies a plurality of communication switch paths to said second telephone and the cost rate of each path.” The corresponding structure is the algorithm disclosed in the specification at column 6 lines 7-47 and Figure 5.

8. “means actuated subsequent to the detection of said telephone number originating from said first telephone for

¹⁴⁵ *Aristocrat*, 521 F.3d at 1337.

¹⁴⁶ See ‘085 Patent col. 6 ll. 7-47, Fig. 5.

¹⁴⁷ ‘085 Patent Reexamination Proceeding at 265-267, 270.

comparing the cost rate of each path so as to determine a least cost route”

As with phrases 6 and 7, this phrase uses the word “means.” By arguing that a skilled artisan “understands the phrase . . . to mean comparing logic actuated subsequent to the detection of said telephone number originating from a first telephone for comparing the cost rate of each path so as to determine a least cost route,” RTI again fails to rebut the presumption that Section 112(f) applies.¹⁴⁸ “Comparing logic” appears nowhere in the claim language. Thus, “means actuated” is a means-plus-function limitation.

The parties also disagree on the structure. RTI argues that even if Section 112(f) applies “a person having ordinary skill in the art understands that comparing logic provides sufficient structure for comparing the cost rate of each path.”¹⁴⁹ Broadvox contends that the specification fails to describe a corresponding function, rendering the claim indefinite.¹⁵⁰

Here, based on the specification and prosecution history, I find that the structure is enclosed in the microprocessing unit (“MPU”) 50, which includes a conventional address 60, control 62, and data buses 64, and an input output bus

¹⁴⁸ RTI Brief at 16.

¹⁴⁹ *Id.*

¹⁵⁰ See Broadvox Brief at 27.

66.¹⁵¹ I thus construe the function as “comparing the cost rate of each path so as to determine a least cost route.” The corresponding structure is enclosed in the MPU 50 and described in column 2 lines 10-11, column 4 lines 1-16, column 6 lines 22-25, and Figures 2 and 5.¹⁵²

9. “means operatively connected to said switch means and said second jack means for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack means to the selected communication path and carrier to establish a switched connection between said first telephone and said second telephone”

The word “means” gives rise to a presumption that Section 112(f) applies. RTI once again attempts to rebut the presumption by replacing “means” with “logic” and arguing that an artisan would be able to identify structure.¹⁵³ However, Federal Circuit law is clear that “[a] patentee cannot avoid providing specificity as to structure simply because someone of ordinary skill in the art would be able to devise a means to perform the claimed function.”¹⁵⁴

¹⁵¹ See ‘085 Patent col. 4 ll. 1-15.

¹⁵² This is the structure RTI urged during the reexamination. See ‘085 Patent Reexamination Proceeding at 265-266.

¹⁵³ See RTI Brief at 17.

¹⁵⁴ *Saffran v. Johnson & Johnson*, 712 F.3d 549, 563 (Fed. Cir. 2013) (internal citations omitted).

Given that means-plus-function applies, the parties disagree on the proposed structure. Citing to the specification and prosecution history, Broadvox argues that the structure is “the combination of a tone generator with a crystal oscillator (which generates the number sequence), and an analog switch (so that “call is routed through said second jack means to the selected communication path . . .”).¹⁵⁵ Broadvox cites column 2 lines 11-18, column 4 lines 34-39, and Figure 2 for support.¹⁵⁶

RTI contends that Broadvox’s proposed construction “violates the doctrine of claim differentiation” by limiting claim 1 to the structure of dependent claim 5.¹⁵⁷ Claim 5 states “the device according to claim 1 wherein said means for generating said number sequence comprises a dual tone multifrequency generator.”¹⁵⁸ RTI also objects that Broadvox improperly imports terms from the “preferred embodiment” by citing to column 4 lines 34-39 and Figure 2.¹⁵⁹

RTI’s objections are meritless. Where a claim term and a dependent

¹⁵⁵ 1/2/14 Letter of George Pazuniak to the Court (“1/2/14 Pazuniak Ltr.”) at 1.

¹⁵⁶ See *id.* at 1-2.

¹⁵⁷ 1/7/14 Letter of Milton Springut to the Court (“1/7/14 Springut Ltr.”) at 1.

¹⁵⁸ ‘085 Patent col. 7 ll. 49-51.

¹⁵⁹ 1/7/14 Springut Ltr. to the Court at 2.

claim term “concern the same function” and a structure for performing that function is disclosed, “a patentee cannot rely on claim differentiation to broaden a means-plus-function limitation beyond those structures specifically disclosed in the specification.”¹⁶⁰ Additionally, Section 112(f) *requires* a court to import “the corresponding structure, material, or acts described in the specification.”¹⁶¹

I therefore construe the claimed functions as “generating a number sequence corresponding to a desired carrier for routing call to establish a switched connection between said first telephone and said second telephone.” I construe the corresponding structure as described in column 2 lines 11-18, column 4 lines 34-39, and Figure 2.

C. Disputed Constructions for Claim 1 of the ‘769 Patent

1. “at a predetermined time and date”

RTI argues that an artisan would construe the phrase as “at a predetermined date and time.”¹⁶² Broadvox responds that this Court should follow Judge Young’s construction in *MediaCom I*.¹⁶³ Judge Young defined the phrase as

¹⁶⁰ *Saffran*, 712 F. 3d at 563.

¹⁶¹ 35 U.S.C. § 112(f).

¹⁶² RTI Brief at 18.

¹⁶³ See Broadvox Brief at 31.

“a time and date for calling the rate provider are selected a substantial period in advance of the call.”¹⁶⁴ Moreover, during the ‘769 Patent reexamination, RTI limited the meaning of “predetermined date and time to overcome prior art,” stating:

It is also noted that [the prior art] fails to meet the claim language because it does not teach that the call rating device connects to the rate provider “at a predetermined time and date.” [The prior art] teaches . . . only that the internal clock triggers the processor “at given time intervals.” Programming the system to update at selected time intervals (e.g. once a week) is not the same as programming it to update at a particular date and time (e.g. May 4, 2001 at 8:45 a.m.).¹⁶⁵

As Judge Young stated, “[t]he words [at a predetermined date and time] used in the claim are simple English On its face, the language signifies that a particular time and date must be selected substantially in advance of the connection.”¹⁶⁶ In light of the prosecution history and construction, I mostly agree with Judge Young’s construction. However, I disagree that “at a predetermined date and time” by its plain terms requires that the date and time be selected *substantially* in advance.¹⁶⁷ Nothing in the prosecution history or specification suggests that the

¹⁶⁴ *MediaCom I*, 4 F. Supp. 2d at 32.

¹⁶⁵ ‘769 Patent Reexamination Proceeding at 406.

¹⁶⁶ *MediaCom I*, 4 F. Supp. 2d at 31.

¹⁶⁷ As I stated in the *Markman* hearing, “Why wouldn’t [predetermined date and time] just be ‘selected a period in advance of the call’? What is

word “substantially” is required.¹⁶⁸ I therefore construe “at a predetermined date and time” as “a time and date for calling the rate provider selected a period in advance of the call.”

2. “call rating device”

Although the patent does not use the word “means,” Broadvox argues that Section 112(f) applies because the Federal Circuit has recognized that “generic terms ‘mechanism,’ ‘means,’ ‘element,’ and ‘device,’ typically do not connote sufficiently definite structure.”¹⁶⁹ Broadvox proposes that the phrase be construed as “an identifiable physical component having the function of receiving rate information from a rate provider over a data transfer line, incorporating the rate information and thereafter managing calls over the least cost routing route.”¹⁷⁰ For structure, Broadvox pieces together various lines from the specification.¹⁷¹

The phrase at issue is not a means-plus-function limitation under Section 112(f). *First*, the phrase does not contain the word “means.” The Federal

substantial? [S]ubstantial is not a very definite term.” Tr. at 121:2-4.

¹⁶⁸ Broadvox agreed that “substantially” was not required. *See* Tr. at 121:17-19 (Pazuniak: “In other words, it is a planned, selected time and date.”).

¹⁶⁹ *Massachusetts Inst. of Tech. and Elecs. for Imaging, Inc. v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006).

¹⁷⁰ Broadvox Brief at 33.

¹⁷¹ *See* 1/2/14 Pazuniak Ltr. to the Court at 2.

Circuit will not apply Section 112(f) if the limitation contains a term that “is used in common parlance or by persons of skill in the pertinent art to designate structure.”¹⁷² “Call rating device” presumptively connotes a sufficient structure to those skilled in the art.¹⁷³ Walton explains that such devices were known.¹⁷⁴ Furthermore, the specification explains that the invention in the earlier filed ‘085 Patent is a call rating device, also known as a least cost routing device.¹⁷⁵ As Broadvox notes, during the ‘085 Patent reexamination, RTI distinguished its invention from prior art that included “more primitive” least cost routing devices.¹⁷⁶ Finally, although he did not construe the phrase, Judge Young noted that “call rating device” is a known generic term for “Least Cost Routing Device.”¹⁷⁷ Thus, the specification and common parlance impart sufficient structure such that Section 112(f) does not apply. At the *Markman* hearing, Broadvox argued that “call rating device” is a vague term because it is not clear

¹⁷² *Flo Healthcare*, 697 F.3d at 1374.

¹⁷³ *See Inventio*, 649 F.3d at 1359.

¹⁷⁴ *See Declaration of Bradley Walton ¶ 43.*

¹⁷⁵ *See* ‘769 Patent col. 1 ll. 25-32; col. 2 ll. 53-64.

¹⁷⁶ Broadvox Brief at 28-29 (citing ‘085 Patent Reexamination Proceeding at 291, 305-306).

¹⁷⁷ *Mediacom I*, 4 F. Supp. 2d at 29.

what is being rated, but RTI clarified that the rating is “based on cost.”¹⁷⁸ For clarity, I construe “call rating device” as used in the patents-at-issue as “least cost routing device.”

3. “transmitting over the data transfer line”

Broadvox urges that the term be construed as “conveying information over the same wire operatively connected to a call rating device on one end and a phone network on the other.”¹⁷⁹ RTI urges the Court to construe the phrase as “transmitting over the data transfer line.”¹⁸⁰ RTI argues that Broadvox improperly limits the term to mean a *single* data transfer line even in the face of Federal Circuit law that definite articles such as “a,” “an,” or “the” mean “one or more.”¹⁸¹ Broadvox responds that RTI’s proposed construction will mislead the jury into thinking that information is communicated via a data transfer line different from the earlier defined line.¹⁸² Thus, the debate is whether “data transfer line” refers to the same “data transfer line” mentioned earlier in Claim 1.

¹⁷⁸ Tr. at 127:2.

¹⁷⁹ Broadvox Brief at 33.

¹⁸⁰ RTI Brief at 20; RTI Reply at 27-28.

¹⁸¹ RTI Reply at 38 (citing *Baldwin Graphic Sys., Inc. v. Siebert, Inc.* 512 F.3d 1338, 1342-343 (Fed. Cir. 2008)).

¹⁸² See Broadvox Brief at 34.

Claim 1 states the following limitations:

- [i] *connecting at a predetermined time and date via a data transfer line the call rating device to a rate provider having billing rate parameters for a plurality of calling stations;*
- [ii] *transmitting over the data transfer line indicia identifying the call rating device and the date and time of the last update of the billing rate parameters . . .*¹⁸³

Although RTI is correct that the antecedent phrase, “a data transfer line” is broad enough to cover multiple lines, each use of the phrase “the data transfer line” still refers to the antecedent phrase.¹⁸⁴ The phrase “data transfer line” connects the call rating device to a rate provider. I therefore adopt Broadvox’s construction with the modification that more than one wire may connect the call rating device to the phone network.¹⁸⁵ I construe the phrase as “transmitting information over the same wire or wires operatively connected to a call rating device on one end and a phone network on the other.”

4. “verifying if billing rate parameters should be updated”

¹⁸³ ‘769 Patent col. 6 ll. 38-45 (emphasis added).

¹⁸⁴ See *Creative Internet Adver. Corp. v. Yahoo!, Inc.*, 476 Fed. App’x 724, 728 (Fed. Cir. 2011); *Baldwin*, 512 F.3d at 1342 (“The subsequent use of definite articles ‘the’ or ‘said’ in a claim to refer back to the same claim term does not change the general plural rule [of ‘a’], but simply reinvokes that non-singular meaning.”).

¹⁸⁵ At the *Markman* hearing, Broadvox agreed to use the word “transmitting” rather than “conveying.”

Broadvox urges the Court to construe the claim as “the rate provider, based on the information received from the call rating device, verifies if the billing rate parameters should be updated.”¹⁸⁶ RTI contends that the term should be construed as is: “verifying if billing rate parameters should be updated.”¹⁸⁷ The issue is whether the Court must identify the actor doing the “verifying.”

RTI suggests that the Court follow Judge Young’s analysis of a similar term.¹⁸⁸ In construing “connecting at a predetermined data and time” in *Mediacom I*, Judge Young concluded that “[t]he language does not require that the person responsible for the selection be identified in order to give meaning to the claim.”¹⁸⁹ RTI argues that the same is true for the “verifying” step.¹⁹⁰

I disagree. As I stated at the *Markman* hearing, “verifying” is an act that requires an actor, while “connecting” may not be.¹⁹¹ If the actor cannot be

¹⁸⁶ Claim Terms Chart at 7.

¹⁸⁷ *Id.*

¹⁸⁸ See *MediaCom I*, 4 F. Supp. 2d at 31.

¹⁸⁹ *Id.*

¹⁹⁰ See RTI Brief at 39.

¹⁹¹ See Tr. at 138:19-25, 139:1-3 (Court: “[V]erifying’ is an act [C]onnecting at a predetermined time and place . . . [is] not an act of doing something.”).

identified, the claim fails for indefiniteness.¹⁹² However, when read in the context of claim 1, there is no doubt that the rate provider does the “verifying.” Claim 1 recites:

A method for updating a database . . . comprising the steps of:

- [i] connecting at a predetermined time and date via a data transfer line the call rating device to a rate provider having billing rate parameters for a plurality of calling stations;
- [ii] transmitting over the data transfer line indicia identifying the call rating device and the date and time of the last update of the billing rate parameters;
- [iii] *verifying if billing parameters should be updated*; and
- [iv] transmitting from the rate provider to the call rating device the updated billing rate parameters *when the rate provider determines that an update is required.*¹⁹³

Thus, the call rating device sends information — including information on the last update — to the rate provider. The rate provider verifies if billing parameters should be updated. If the rate provider determines that an update is required, it transmits updated billing rate parameters to the call rating device. I therefore adopt Broadvox’s construction. I construe “verifying if billing parameters should be

¹⁹² See *id.* at 140:15-19 (Court: “[I]f you want the claim to fail for indefiniteness, that’s fine. But it has to explain how to practice this patent. I am worried that without knowing who’s verifying, there isn’t something being claimed here.”).

¹⁹³ ‘769 Patent col. 6 ll. 35-49 (emphasis added).

updated” as “the rate provider, based on the information received from the call rating device, verifies if the billing rate parameters should be updated.”

5. “transmitting from the rate provider to the call rating device”

Similarly, Broadvox suggests that the term be construed as “the rate provider, based on the information received from the call rating device, transmits the billing rate parameters to the call rating device.”¹⁹⁴ RTI contends that the term be construed as is: “transmitting from the rate provider to the call rating device.”¹⁹⁵ The parties disagree on whether to include the phrase “based on the information received from the call rating device.”

Broadvox argues that the phrase derives from the second limitation of claim 1: “transmitting . . . indicia *identifying the call rating device and the date and time of the last update of the billing rate parameters.*”¹⁹⁶ If the rate provider “determines that an update is required” based on this indicia, it transmits the updated billing parameters to the call rating device. Broadvox also cites to column 5 lines 55-59 of the specification, stating:

¹⁹⁴ Claim Terms Chart at 8.

¹⁹⁵ *Id.*

¹⁹⁶ 1/2/14 Pazuniak Ltr. to the Court at 2 (citing ‘769 Patent col. 6 ll. 42-45).

As shown in Fig. 7, the rate provider receives the update request from the call rating device (block 160). It receives 1) the calling station's phone number; 2) the date and time of the last update; and 3) the current date and time (block 162) . . . If a newer rate table is available, (block 173), then an update flag is initiated by the processing unit of the rate provider (block 174) and the update is sent . . .¹⁹⁷

RTI responds that Broadvox's added language "breeds confusion and redundancy,"¹⁹⁸ but, based on the claim language and the specification, I disagree. I construe "transmitting from the rate provider to the call rating device" as "the rate provider, based on the information received from the call rating device, transmits the billing rate parameters to the call rating device."

V. CONCLUSION

For the aforementioned reasons, I construe the disputed terms as follows:

Table 3

| '085 Patent, Claim 1 | |
|--|--|
| Term/Phrase | Construction |
| 1. "a housing forming an enclosure and comprising" | "a unitary physical structure that includes a first jack for connection to a first telephone and a second jack for connection to a network. A claimed device may have more than one housing forming an enclosure, as defined above." |

¹⁹⁷ *Id.* (citing '769 Patent col. 5 ll. 55-59; col. 6 ll. 2-4).

¹⁹⁸ 1/7/14 Springut Ltr. to the Court at 3.

| '085 Patent, Claim 1 | |
|--|--|
| Term/Phrase | Construction |
| 2. "switch means operatively connected to said first jack means for disconnecting (as defined below) said first telephone from said network during routing of a telephone call from said first telephone" | "switch operatively connected to said first jack for disconnecting said first telephone from said network during routing of a telephone call from said first telephone." |
| 3. "disconnecting" | "the interruption—the breaking or opening—of the electrical circuit between the telephone jack and the network." |
| 4 & 5. "means operatively connected to said switch means for generating a current through said switch means to the first telephone corresponding to a current provided by said network, when the first telephone is disconnected from said network to said switch means" | "an intermediate element that conditions or regulates electrical power from a more distant source so that it corresponds to the current that would otherwise have been provided directly by the telephone network, and passes the current through the switch to power the telephone." |
| 6. "means operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone" | <p>This is a means-plus-function element, whose construction is governed by 35 U.S.C. § 112(f).</p> <p><i>Function:</i> detecting and storing said telephone number originating from the first telephone.</p> <p><i>Structure:</i> col. 4 ll. 40-43 and Fig. 2. The dial tone detect circuit (86) connects to the line coming from the polarity guard (42) and connects to the line detector (40). The DTMF tone detector (88) detects and saves tones generated from the first phone.</p> |

| '085 Patent, Claim 1 | |
|--|---|
| Term/Phrase | Construction |
| 7. "means for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path" | <p>This is a means-plus-function element, whose construction is governed by 35 U.S.C. § 112(f).</p> <p><i>Function:</i> addressing a database that identifies a plurality of communication switch paths to said second telephone and the cost rate of each path.</p> <p><i>Structure:</i> the algorithm disclosed in the specification at col. 6 ll. 7-47 and Fig. 5.</p> |
| 8. "means actuated subsequent to the detection of said telephone number originating from said first telephone for comparing the cost rate of each path so as to determine a least cost route" | <p>This is a means-plus-function element, whose construction is governed by 35 U.S.C. § 112(f).</p> <p><i>Function:</i> comparing the cost rate of each path so as to determine a least cost route.</p> <p><i>Structure:</i> Ref. No. 50; col. 2 ll. 10-11; col. 4 ll. 1-16; col. 6 ll. 22-25; Figs. 2, 5.</p> |
| 9. "means operatively connected to said switch means and said second jack means for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack means to the selected communication path and carrier to establish a switched connection between said first telephone and said second telephone" | <p>This is a means-plus-function element, whose construction is governed by 35 U.S.C. § 112(f).</p> <p><i>Function:</i> generating a number sequence corresponding to a desired carrier for routing call to establish a switched connection between said first telephone and said second telephone.</p> <p><i>Structure:</i> col. 2 ll. 11-18; col. 4 ll. 34-39 and Fig. 2.</p> |

| '769 Patent, Claim 1 | |
|--|--|
| Term/Phrase | Construction |
| 1. "at a predetermined time and date" | "a time and date for calling the rate provider selected a period in advance of the call." |
| 2. "call rating device" | "least cost routing device." |
| 3. "transmitting over the data transfer line" | "transmitting information over the same wire or wires operatively connected to a call rating device on one end and a phone network on the other." |
| 4. "verifying if billing rate parameters should be updated" | "the rate provider, based on the information received from the call rating device, verifies if the billing rate parameters should be updated." |
| 5. "transmitting from the rate provider to the call rating device" | "the rate provider, based on the information received from the call rating device, transmits the billing rate parameters to the call rating device." |

SO ORDERED:



Shira A. Scheindlin
U.S.D.J.

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